

REMARKS

Claims 1-54 are currently pending in the present application. Claims 1-6, 8, 9, 16-18, 23, 24, 26, 27, 34-36, and 41 stand rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 6,634,590 to Rau et al. (hereinafter “Rau”). Claims 7, 25, 42, and 43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rau in view of United States Patent No. 4,959,951 to Mori et al. (hereinafter “Mori”). Claims 10-15, 19-22, 28-33, 37-40, 44-54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rau.

Applicants respectfully request consideration of the application in view of the foregoing amendments and the following remarks.

Claims 1-6, 8, 9, 16-18, 23, 24, 26, 27, 34-36, and 41 and 35 U.S.C. § 102(b)

The rejection of claims 1-6, 8, 9, 16-18, 23, 24, 26, 27, 34-36, and 41 as being anticipated by Rau under 35 U.S.C. § 102(b) is respectfully traversed.

A. Claims 1-5

Rau is generally directed to methods of forming wound fiber packages and to wound fiber packages. Embodiments of Rau involve “wind[ing] a fiber strand onto a bobbin to form a package in a manner such that upon later use, the strand is not drawn across selected surface portions of the package so as to reduce strand abrasion and breakage.”¹ The strand wound onto a bobbin, in some embodiments, is supplied from a forming package.² The bobbins can be “used to form warp beams and supply weft, or fill, yarn during a weaving operation.”³

Claim 1 recites a method of weaving a fabric using fill yarns from at least one forming package that comprises providing a plurality of warp yarns to a loom, providing at least one forming package of yarn as a fill yarn to the loom by paying out the yarn from the outside of the at least one forming package, and weaving the plurality of warp yarns and the fill yarn to form a fabric. Thus, in claim 1, yarn from at least one forming

¹ Rau, col. 2, l. 66 to col. 3, l. 2.

² See, e.g., *id.*, col. 5, l. 49 to col. 6, l. 48; FIG. 1.

³ *Id.*, col. 1, ll. 22-23.

package is provided to the loom as a fill yarn without first winding the yarn from the forming package onto a bobbin.

Regarding claim 1, the Office Action states that the limitations recited therein “have been cited as well known and conventional practice in the art of yarn feeding to looms by the instant Background Of Invention.”⁴ The Office Action further states: “The only limitation that is not implicitly disclosed in the Background is that the fill yarn be payed out from the outside of the forming package.”⁵ Applicants respectfully traverse this assertion in the Office Action. Applicants respectfully submit that nowhere in the Background section of their application is it stated or implied that fill yarn can be provided directly from a forming package to a loom as recited in claim 1. Rather, the Background states: “Twisted bobbin yarns are also fed to the loom as fill yarns to make the fabric.”⁶ Applicants’ invention does not utilize bobbin yarns as described in its Background (and as described in Rau).

One of the advantages of embodiments of Applicants’ invention is the elimination of the step of winding yarn from a forming package into a bobbin prior to supplying the yarn to a loom as a fill yarn.⁷ Further, claim 1 clearly recites: “providing at least one forming package of yarn as a fill yarn to the loom by paying out the yarn from the outside of the at least one forming package.” Applicants respectfully submit that Rau does not teach or suggest this feature since Rau is focused entirely on winding yarns into bobbins (including winding yarns from forming packages into bobbins prior to supplying the yarns from the bobbins to a loom). For at least this reason, Applicants respectfully submit that claim 1 is patentable over Rau. As claims 2-5 depend from and further limit claim 1, Applicants respectfully assert that claims 2-5 are also not anticipated by Rau and respectfully request that the rejection of these claims also be withdrawn.

Applicants also wish to discuss the following statements in the Office Action:

The only limitation that is not implicitly disclosed in the Background is that the fill yarn be payed out from the outside of the forming package. This limitation is considered to be inherent to the disclosure in the Background because if the yarn were not payed out from

⁴ Office Action mailed October 3, 2005, page 2.

⁵ *Id.*

⁶ Specification, p. 3, ll. 3-4.

⁷ *See, e.g., id.*, p. 3, ll. 7-10.

somewhere “outside the forming package” then the yarn would not be able to be payed out at all.⁸

Applicants respectfully acknowledge that paying out yarn from a forming package inherently involves the yarn being displaced somewhere “outside the forming package.” Applicants, however, respectfully assert that the Office Action misinterprets this limitation in claim 1. Yarn can generally be removed from a forming package either by inside payout or by outside payout. Inside payout occurs when the yarn is removed beginning from the inside of the forming package and proceeding to the outside of the forming package. In this process, yarn located in the interior of the forming package is removed before yarn located on the exterior of the forming package, and the removal process proceeds from the inside-out. Outside payout, however, occurs when yarn is removed beginning from the exterior of the forming package and proceeding to the interior of the forming package. In this process, yarn located on the outside of the forming package is removed before yarn located in the interior of the forming package, and the removal process proceeds from the outside-in. A discussion of outside payout consistent with this interpretation can be found in the specification, for example, on page 10, line 19 through page 11, line 12.

B. Claims 6, 8, 9, 16-18, 23, 24, 26, 27, and 34-36

Applicants have amended claims 6 and 23. Support for these amendments can be found at page 5, lines 3-8 and page 19, lines 10-20, as well as elsewhere throughout the specification. Additional support can be found in Figures 1-5.

Amended claim 6 recites an apparatus for providing a forming package of yarn with substantially no twist to a loom that comprises at least one forming package holder, and at least one payout ring removably coupled to the at least one forming package holder, the payout ring comprising a ring and a hub, wherein the hub secures the payout ring to the forming package holder.

Amended claim 23 recites an apparatus for providing a forming package of yarn with substantially no twist to a loom that comprises at least one forming package holder, and at least one payout ring removably coupled to the at least one forming package

⁸ Office Action mailed October 3, 2005, page 2.

holder, the payout ring having a diameter larger than a diameter of the forming package to be provided to the loom.

Rau does not disclose an apparatus consistent with those recited in claims 6 and 23. The ring (40) of the apparatus disclosed in Rau is not coupled to a forming package holder. The ring (40) is coupled to a bobbin winder (10), which is spatially independent from the rotatable support (18), which holds the forming package (16) shown in FIG. 1 of Rau. For at least the reason that Rau does not teach or suggest a payout ring removably coupled to a forming package holder as recited in claims 6 and 23, Applicants respectfully submit that claims 6 and 23 are patentable over Rau. As claims 8, 9, and 16-18 depend from and further limit claim 6 or an intervening dependent claim, Applicants respectfully assert that claims 8, 9, and 16-18 are also patentable over Rau and respectfully request that the rejection of these claims also be withdrawn. As claims 24, 26, 27, and 34-36 depend from and further limit claim 23 or an intervening dependent claim, Applicants respectfully assert that claims 24, 26, 27, and 34-36 are also patentable over Rau and respectfully request that the rejection of these claims also be withdrawn.

Applicants also wish to comment on the following statements in the Office Action:

Referring to figure 1, the bobbin holder in Rau is coupled to a stand 52 as claimed. The package or bobbin in Rau is vertically oriented as claimed. Rau also discloses an eyelet 24 for guiding a yarn to a further area or device. There is nothing structurally that would not allow the yarn in Rau to be led to a loom or any other device.⁹

Applicants wish to clarify that the yarn in FIG. 1 of Rau is not paid out from the bobbin 28 on the strand twisting apparatus 32 through the pig-tail 24. Rather, a strand 14 is drawn from a forming package 16 through the pig-tail 24 and wound about the bobbin 28 on the bobbin winder 10. In other words, the strand 14 is being wound on the bobbin 28 in FIG. 1, not paid out from the bobbin.

⁹ Office Action mailed October 3, 2005, page 3.

C. Claim 41

Claim 41 recites a system for weaving fabrics that comprises a loom, a beam of warp yarn, at least one package holder, at least one forming package positioned on the at least one package holder, at least one payout ring removably coupled to the at least one package holder, the at least one payout ring having a diameter larger than the diameter of the at least one forming package.

As set forth above in connection with claims 6 and 23, Rau does not teach or suggest a payout ring removably coupled to a package holder for a forming package. For at least this reason, Applicants respectfully submit that claim 41 is patentable over Rau.

Claims 7, 25, 42, and 43 and 35 U.S.C. § 103(a)

The rejection of claims 7, 25, 42, and 43 and being unpatentable over Rau in view of Mori under § 103(a) is respectfully traversed.

Mori relates generally to a yarn guide device for a two-for-one twister. The Office Action only cites Mori as teaching “a yarn guide and winding device that uses a ring member with spokes to connect the ring to the hub of the device.” However, Mori does not teach or suggest a payout ring removably coupled to a forming package holder as recited in independent claims 6 and 23, or a payout ring removably coupled to a package holder having a forming package positioned on it as recited in independent claim 41. Accordingly, Mori does not cure the deficiencies of Rau discussed above as to independent claims 6, 23, and 41. As claim 7 depends from claim 6, claim 25 depends from claim 23 or an intervening dependent claim, and claims 42 and 43 depend from claim 41 or an intervening dependent claim, Applicants respectfully submit that these claims are patentable over Rau in view of Mori.

Claims 10-15, 19-22, 28-33, 37-40, and 44-54 and 35 U.S.C. § 103(a)

The rejection of claims 10-15, 19-22, 28-33, 37-40, and 44-54 as being unpatentable over Rau under 35 U.S.C. § 103(a) is respectfully traversed.

Claims 10-15 and 19-22 depend from claim 1 or an intervening dependent claim. Applicants have previously set forth why claim 1 is patentable over Rau. As claims 10-

15 and 19-22 each depend from claim 1 or an intervening dependent claim, Applicants likewise respectfully submit that these claims are patentable.

Claims 28-33 and 37-40 depend from claim 23 or an intervening dependent claim. Applicants have previously set forth why claim 23 is patentable over Rau. As claims 28-33 and 37-40 each depend from claim 23 or an intervening dependent claim, Applicants likewise respectfully submit that these claims are patentable.

Claims 44-54 depend from claim 41 or an intervening dependent claim. Applicants have previously set forth why claim 41 is patentable over Rau. As claims 44-54 each depend from claim 41 or an intervening dependent claim, Applicants likewise respectfully submit that these claims are patentable.

CONCLUSION

In view of the foregoing, an allowance of the claims is respectfully solicited. The Examiner is respectfully invited to contact J. Jason Link at 336.607.7443 to discuss any matter related to the present application.

Respectfully submitted,

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Date

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